



Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

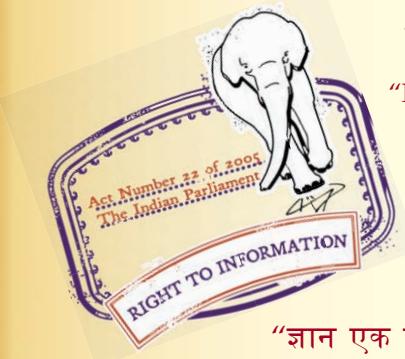
“Step Out From the Old to the New”

IS 11272 (1985): Glossary of terms relating to horticultural equipment [FAD 21: Farm Implements and Machinery]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



PROTECTED BY COPYRIGHT

Indian Standard

**GLOSSARY OF TERMS RELATING TO
HORTICULTURAL EQUIPMENT**

UDC 001.4 : 631.34



© Copyright 1986

**INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002**

Indian Standard

GLOSSARY OF TERMS RELATING TO HORTICULTURAL EQUIPMENT

Horticultural Equipment Sectional Committee, AFDC 44

<i>Chairman</i>	<i>Representing</i>
Dr T. P. OJHA	Indian Council of Agricultural Research, New Delhi
<i>Members</i>	
<i>SHRI K. C. BHARADWAJ (Alternate to Dr T. P. Ojha)</i>	
AGRICULTURAL ENGINEER	Department of Agricultural, Government of Himachal Pradesh, Simla
SHRI V. W. AMBEKAR	Department of Agriculture, Government of Uttar Pradesh, Lucknow
SHRI BHUPENDRA	National Agricultural Co-operative Marketing Federation of India Ltd, New Delhi
SHRI B. B. NAYyar (Alternate)	Pocha Seeds Pvt Ltd, Pune
SHRI V. G. BROKER	Shree Vishwakarma Industries, Calcutta
SHRI UDAY TIWARI (Alternate)	Forest Research Institute & Colleges, Dehra Dun
SHRI SUSHIL KUMAR CHOURHARY	
DIRECTOR OF FORESTRY RESEARCH	
<i>ASSISTANT SILVICULTURIST (Alternate)</i>	
SHRI G. B. GOSWAMI	Premier Corporation, New Delhi
SHRI M. L. GUPTA	Department of Agriculture, Government of Jammu & Kashmir, Srinagar
SHRI K. K. KAUL	Indian Agricultural Research Institute (ICAR), New Delhi
SHRI S. K. ADLAKHA (Alternate)	
SHRI PARAMJIT SINGH MUDHAR	Mudhar Allied Traders, Delhi
SHRI G. S. MUDHAR (Alternate)	
SHRI SARBAG SINGH PASSI	Passi Mechanical Works, Ludhiana
SHRI K. SADDY	Central Public Works Department, New Delhi
SHRI V. K. SHARMA	Punjab Agricultural University, Ludhiana
Dr B. S. DHILLON (Alternate)	

(*Continued on page 2*)

© Copyright 1986

INDIAN STANDARDS INSTITUTION

This publication is protected under the *Indian Copyright Act (XIV of 1957)* and reproduction in whole or in part by any means except with written permission of the publisher shall be deemed to be an infringement of copyright under the said Act.

IS : 11272 - 1985

(*Continued from page 1*)

Members

SHRI SHYAM SINGH
SHRI S. N. SRIVASTAVA
SHRI S. C. VIRMANI
SHRI INDER MOHAN SHARMA
(Alternate)
SHRI T. PURNANANDAM,
Director (Agri & Food)

Representing

Archaeological Survey of India, New Delhi
Ministry of Agriculture & Rural Development
Kay Bee Industries (India) Pvt Ltd, New Delhi

Director General, ISI (*Ex-officio Member*)

Secretary

SHRI R. N. SHARMA
Joint Director (Agri & Food), ISI

AMENDMENT NO. 1 MAY 1987

TO

**IS:11272-1985 GLOSSARY OF TERMS RELATING TO
HORTICULTURAL EQUIPMENT**

(Page 6, Fig. 9) - Substitute the figure given above 'Fig. 10 Transplanting Trowel' for the existing figure.

(Page 6, Fig. 10) - Substitute the figure given above 'Fig. 9 Hand Dibbler' for the existing figure.

(AFDC 44)

Indian Standard

GLOSSARY OF TERMS RELATING TO HORTICULTURAL EQUIPMENT

0. F O R E W O R D

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 May 1985, after the draft finalized by the Horticultural Equipment Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Use of equipment is increasing for various horticultural operations. In order to define the terms and equipment in this field, this standard has been formulated.

0.3 In preparation of this standard, assistance has been derived from ISO/DIS 5395/1 Power lawn mowers, lawn tractors, lawn and garden tractors with moving attachments safety requirements and test procedures: Part I Definitions, published by International Organization for Standardization.

1. SCOPE

1.1 This standard covers the definitions of various terms used in relation to horticultural equipment.

2. EQUIPMENT FOR LAYOUT

2.1 *Khurpi* — A hand tool comprising a blade and a short handle used for loosening the soil, weeding and earthing up (see Fig. 1).



FIG. 1 KHURPI

2.2 *Kodali* — A hand tool consisting of a wide blade and a wooden handle used for loosening and cutting the soil (see Fig. 2).



FIG. 2 KODALI

2.3 Shovel — A hand tool comprising a narrow blade and a wooden handle having a grip at the rear for digging, scooping and throwing the soil (*see* Fig. 3).

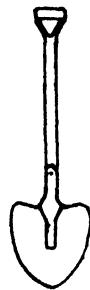


FIG. 3 SHOVEL

2.4 Spade (Phowrah) — A hand tool comprising a broad blade and a wooden handle used for loosening, cutting, earthing, dressing and removing the soil (*see* Fig. 4).

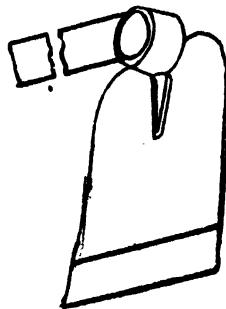


FIG. 4 SPADE

3. EQUIPMENT FOR PLANT PROPOGATION

3.1 Budding and Grafting Knife — A knife used for budding and grafting purposes (*see Fig. 5*).



FIG. 5 BUDDING AND GRAFTING KNIFE

3.2 Budding Knife — A knife to remove the bud from the scion, to cut the stock, slit and raise the bark to insert the bud (*see Fig. 6*).



FIG. 6 BUDDING KNIFE

3.3 Budding Tape — Tape used in holding the buds in their position after budding operation.

3.4 Garden Trowel — A transplanting trowel used for digging and lifting small plants (*see Fig. 7*).



FIG. 7 GARDEN TROWEL

3.5 Grafting Knife — A knife to cut the wood from scion and to insert the same in the stock (*see Fig. 8*).



FIG. 8 GRAFTING KNIFE

3.6 Hand Dibbler — A peg type tool used for making holes in soil for placing the seeds (*see Fig. 9*).



FIG. 9 HAND DIBBLER

3.7 Transplanting Trowel—A scoop-shaped tool with handle used for digging and lifting small plants without damaging the root zone for their transplanting (*see* Fig. 10).



FIG. 10 TRANSPLANTING TROWEL

4. EQUIPMENT FOR INTERCULTURE

4.1 Digging Fork—Fork with long handle used for digging (*see* Fig. 11).



FIG. 11 DIGGING FORK

4.2 Garden Fork — A hand tool with handle and prongs placed in line of handle or perpendicular to it used for loosening the soil (*see* Fig. 12).



FIG. 12 GARDEN FORK

4.3 Garden Rake — A hand tool used for collecting uprooted weeds, breaking clods and to some extent levelling of seed bed in the garden (*see* Fig. 13).



FIG. 13 GARDEN RAKE

4.4 Hand Cultivator — A hand tool with prongs and handle used for collecting the weeds and breaking the clods in the garden (*see* Fig. 14).



FIG. 14 HAND CULTIVATOR

4.5 Hoe — A hand tool with blade(s), tine(s) and sometime with disc(s) attached to a frame used for inter-cultivation of row crops (*see* Fig. 15).

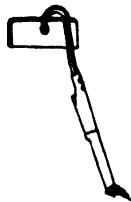


FIG. 15 HOE

4.6 Hoe and Rake Combined — A hand tool having one side rake and opposite side hoe (*see* Fig. 16).



FIG. 16 HOE AND RAKE COMBINED

4.7 Trenching Hoe — A hand tool, having one side a miniature spade and opposite side *KODALI*, used for making small trenches in nurseries and gardens (*see* Fig. 17).

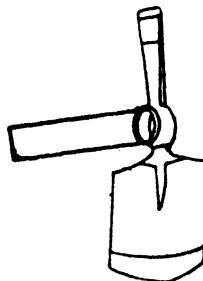


FIG. 17 TRENCHING HOE

5. EQUIPMENT FOR ORNAMENTAL OPERATIONS

5.1 Bill Hook — A hand tool used for lopping of branches and cleaning in plantation and estate. It may have single edge or double edge (*see* Fig. 18).

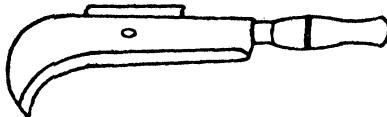


FIG. 18 BILL HOOK

5.2 Dah — A metal piece with handle used for cutting trees and clearing jungle growth (*see* Fig. 19).



FIG. 19 DAH

5.3 Forester's Shear — A shear for pruning thicker stock.

5.4 Garden Hatchet — An axe-like tool with one side sharp edge having long handle used for cutting branches (*see* Fig. 20).



FIG. 20 GARDEN HATCHET

5.5 Grass Shear — A scissor-like tool used for cutting the grass (*see* Fig. 21).



FIG. 21 GRASS SHEAR

5.6 Grass Sword — A thin metal strip with a handle having one side cutting edge used for cutting the grass normally in bending position (*see* Fig. 22).

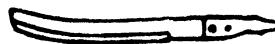


FIG. 22 GRASS SWORD

5.7 Hedge Shear — A scissor-like tool used for pruning of hedges and twigs (*see* Fig. 23).



FIG. 23 HEDGE SHEAR

5.8 Lawn Mowers — A machine where the cutting means operate in the plane of the ground and which uses the ground to determine the height of cut by means of wheels, air cushion or skides, etc (see Fig. 24).

5.8.1 Attachment — Any assembly or component connected to a power unit for the purpose of accomplishing work, such as cutting grass.

5.8.2 Blade Tip Circle — The path described by the outermost point of the cutting means as it rotates about its shaft axis.

5.8.3 Braking System — A combination of one or more brakes and the related means of operation and control.

5.8.4 Control — A means or device which will control the operation of the mower or any specific operating function thereof.

5.8.5 Cutting Means (Blade) — The mechanism used to provide the cutting action for the width of cut of a lawn mower.

5.8.6 Cutting Means Enclosure (Housing) — The part or assembly which provides the protective means around the cutting means.

5.8.7 Cutting Positions — Any designated height adjustment (setting) of the cutting means where it remains operative.

5.8.8 Cutting Width — The width of cut measured across the cutting means at right angles to the direction of travel and calculated from the dimensions of the cutting means or the diameter(s) of the blade tip circle(s).

5.8.9 Cylinder (Real) Mower — A grass-cutting machine with one or more blades rotating about a horizontal axis to provide a shearing action with a stationary cutter bar or knife.

5.8.10 Automatic Declutching Control — A control designed so that it will automatically interrupt power to a drive when the operator's actuating force is removed.

5.8.11 Discharge Chute — An extension of the discharge opening generally used to control the discharge of material from the cutting means.

5.8.12 Discharge Opening — A gap or opening in the cutting means enclosure through which grass may be discharged.

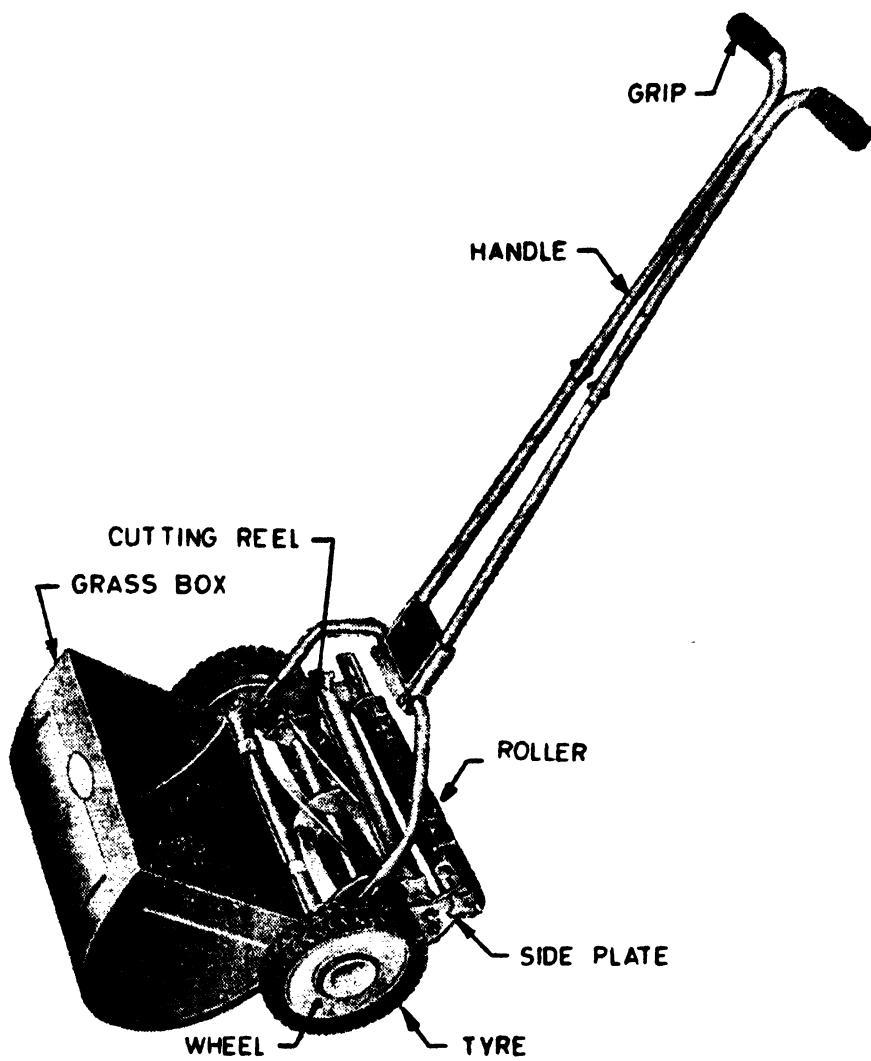


FIG. 24 HAND LAWN MOWER

5.8.13 Edger — A power grass-cutting machine suitable for cutting lawn and soil, usually in a vertical plane.

5.8.14 Flail Mower — A grass-cutting machine which utilizes a power source to rotate a horizontal shaft with blade. Cutting action is accomplished by impact with rotating blades.

5.8.15 Grass Catcher — A part or combination of parts which provide a means for collecting grass clippings or debris.

5.8.16 Guard — A means such as bar, barrier, structural component, etc, that restricts an inadvertent access to a hazardous area.

5.8.17 Lawn Trimmer — A power grass-cutting machine where the operator determines the plane of operation of the cutting means and the height of cut, possibly assisted by a wheel or skid, etc.

5.8.18 Mower Attachment — A cutting means designed to be easily detached from the vehicle generally to allow vehicle to be used without the mower or with other attachments.

5.8.19 Mulching Mower — A rotary mower having a fixed or optional configuration without openings in the mower housing above the plane of the blade for the discharge of grass clippings.

5.8.20 Pedestrian-Controlled Mower or Walk-Behind Mower — A grass-cutting machine, either pushed or self-propelled, normally controlled by the operator walking behind the unit.

5.8.21 Power Lawn Mower — A grass-cutting machine which is powered by mechanical means or electric motor (see Fig. 25)

5.8.22 Ride-on (Riding) Machine; Lawn and Garden (Riding) Tractor — A self-propelled vehicle on which an operator rides which is generally intended for cutting grass. The cutting means may either be an integral part of the vehicle or suspended from or attached to the vehicle.

5.8.23 Safety Device — An installation designed to protect the operator or other persons, for example, shields, grass catching equipment, deflectors, covers for chains, belts, drive shafts, etc.

5.8.24 Shield — A part or an assembly that, unless displaced or removed, restricts access to or from a hazardous area.

5.8.25 Sickle Bar Mower — A cutting machine which utilizes a power source to operate a knife or knives to provide a shearing action with a stationary cutter bar or movable knife.

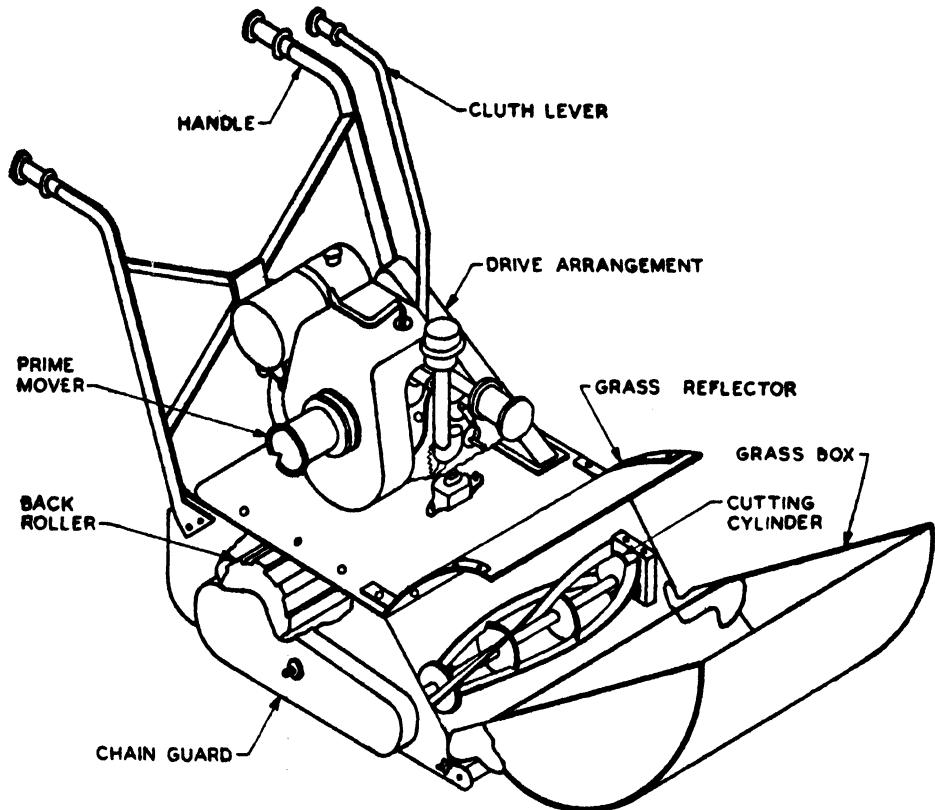


FIG. 25 POWER LAWN MOWER

5.8.26 Sulky Type Unit — A walk behind power lawn mower which has been converted to a riding mower by the addition of an optional trailing device on which the operator rides.

5.8.27 Swing-Over Handle — A handle that pivots from one end of a walk-behind mower to the other end to allow reversing the direction of travel of the mower without turning the mower around.

5.8.28 Thrown Object Hazard — The potential for injury caused by object(s) propelled by the moving cutting means.

5.8.29 Towed Unit — Implement pulled from the drawbar of a propelling machine and usually equipped with wheels for transport.

5.8.30 Traction Drive — The means (system) used to transmit power from the power source to the ground drive means.

5.8.31 Transport Position — The designated state of the mower for propelled transport of the unit, or position to which the cutting means is brought when transporting the mower.

5.9 Lopping Shear — A shear with long handle and smaller blade (see Fig. 26)

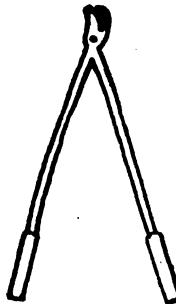


FIG. 26 LOPPING SHEAR

5.10 Pruning Knife — A folding knife with handle used for pruning of small plants (see Fig. 27).



FIG. 27 PRUNING KNIFE

5.11 Pruning Saw — A metal strip with serrated teeth and handle for cutting green stock (see Fig. 28).

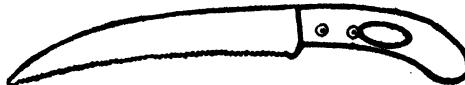


FIG. 28 PRUNING SAW

5.12 Secateur — A scissor-like tool used for pruning the plants (see Fig. 29).



FIG. 29 SECATEUR

5.13 Tree Pruner — A hand tool with long handle used for pruning of high tree (*see* Fig. 30).

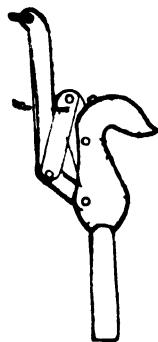


FIG. 30 TREE PRUNER

5.14 Watering Can — A water holding container normally with perforated openings used for applying water to the plants preferably in a spray form (*see* Fig. 31).



FIG. 31 WATERING CAN

6. MISCELLANEOUS

6.1 Draining and Tapping Knife — A blade attached to a wooden handle and is designed to have a V-shaped cutting edge to make narrow

IS : 11272 - 1985

channels in the bark of rubber trees to open the latex cells and to facilitate easy tapping and draining of latex from the tree.

6.2 Orchard Ladder — Ladder used for facilitating picking of fruits, pruning, spraying and other common operations carried out in the gardens.



INDIAN STANDARDS INSTITUTION

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones: 33 10 131, 33 11 375

**Telegrams: Manaksanstha
(Common to all Offices)**

Regional Offices:

Telephone

***Western : Manakalaya, E9 MIDC, Marol, Andheri (East), BOMBAY 400093 6 32 92 95**

**†Eastern : 1/14 C.I.T. Scheme VII M, V.I.P. Road, Maniktola,
CALCUTTA 700054 36 24 98**

Southern : C.I.T. Campus, MADRAS 600113 41 24 42

**Northern : B69 Phase VII, Industrial Focal Point,
S.A.S. NAGAR 160051 (Punjab) 8 73 28**

Branch Offices:

**'Pushpak', Nurmohamed Shaikh Marg, Khanpur, AHMADABAD 380001 { 2 63 48
2 63 49**

**'F' Block, Unity Bldg, Narasimharaaja Square, BANGALORE 560002 22 48 05
Gangotri Complex, Bhadbhada Road, T. T. Nagar, BHOPAL 462003 6 27 16**

22E Kalpana Area, BHUBANESHWAR 751014 5 36 27

5-58C L. N. Gupta Marg, HYDERABAD 500001 22 10 83

R14 Yudhister Marg, C Scheme, JAIPUR 302005 6 98 32

117/418 B Sarvodaya Nagar, KANPUR 208005 4 72 92

Patliputra Industrial Estate, PATNA 800013 8 23 05

Hantex Bldg (2nd Floor), Riy Station Road, TRIVANDRUM 695001 82 27

Inspection Office (With Sale Point):

Institution of Engineers (India) Building, 1332 Shivaji Nagar, PUNE 411005 5 24 35

***Sales Office In Bombay Is at Novelty Chambers, Grant Road,
Bombay 400007 89 65 28**

**†Sales Office In Calcutta Is at 5 Chowinghee Approach, P.O.
Prinsep Street, Calcutta 700072 27 68 08**